



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

**MEMORANDUM**

**DATE:** April 7, 2000

**SUBJECT:** **Diclofop-Methyl.** Outcome of HED Metabolism Assessment Review Committee Meeting on 4/4/00. Chemical No. 110902; DP Barcode D264794.

**FROM:** Sheila Piper, Chemist  
Chemistry and Exposure Branch I  
Health Effects Division (7509C)

**THROUGH:** F.B.Suhre, Branch Senior Scientist  
Chemistry and Exposure Branch 1  
Health Effects Division (7509C)

**TO:** George F. Kramer, Ph.D., Executive Secretary  
Metabolism Assessment Review Committee (MARC)  
RAB1/Health Effects Division (7509C)

**QUESTIONS DISCUSSED**

1. What are the diclofop-methyl residues of concern to be regulated in plant and animal commodities for tolerance setting and risk assessment purposes?
2. Are additional diclofop-methyl metabolites in drinking water at the levels reported of special toxicological concern? If so, which one(s)? Do they warrant inclusion in the dietary risk assessment?

**ATTENDANCE:**

**COMMITTEE MEMBERS:**

George Kramer, Chris Olinger, Alberto Protzel, Nancy Dodd, and John Doherty.

**SCIENTISTS (non-committee members):**

Sheila Piper, Bart Suhre, Rich Griffin, Dean Monos, and Subijoy Dutta (via phone).

## **SUMMARY OF DELIBERATIONS**

The metabolism of diclofop-methyl in wheat, representative rotational crops, ruminants, poultry and rats, as well as in ground and surface water, was presented to the Metabolism Assessment Review Committee (MARC) on 4/4/00 (see briefing dated March 30, 2000, S.Piper). Tolerances are established for combined residues of diclofop-methyl and its metabolites 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoic acid and 2-[4-(2,4-dichloro-5-hydroxyphenoxy)phenoxy]propanoic acid. The MARC concluded that the tolerance expression for diclofop-methyl should remain in terms of both parent diclofop-methyl and its metabolites 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoic acid and 2-[4-(2,4-dichloro-5-hydroxyphenoxy)phenoxy]propanoic acid for plants. Diclofop-methyl is converted to the acid diclofop, and diclofop is hydroxylated on the dichlorophenyl ring. MARC questioned whether the enforcement method would detect metabolites (M5 and M7) characterized as hydroxy metabolite conjugates. The registrant must demonstrate that the enforcement method will convert M5 and M7 metabolites to 2-[4-(2,4-dichloro-5-hydroxyphenoxy)phenoxy]propanoic acid.

For animals, the residue of concern is diclofop-methyl and its metabolite, 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoic acid. Regulation of the hydroxylated metabolite (i.e., HPPA or 2-(4-(2',4'-dichlorohydroxy)phenoxy propanoic acid) is not of concern since tissue levels were low.

The MARC concluded that diclofop-methyl and its metabolite, 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoic acid is the major degradate found in environmental field studies and therefore should be included as residue of concern in drinking water for purposes of risk assessment.

## **CONCLUSIONS**

The HED Metabolism Assessment Review Committee determined the residue of concern for plants is diclofop-methyl and its metabolites, 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoic acid and 2-[4-(2,4-dichloro-5-hydroxyphenoxy)phenoxy]propanoic acid and hydroxy conjugates. For animals, the residue of concern is diclofop-methyl and its metabolite, 2-[4-(2,4-dichlorophenoxy)phenoxy] propanoic acid. It was also concluded that the residue of concern in drinking water are diclofop-methyl and its

metabolite, 2-[4-(2,4-dichlorophenoxy)phenoxy]propanoic acid.

cc: List B File, S.Piper (CEB1), HED Metabolism Committee File (G. Kramer)

RDI: FBSuhre:4/7/00

7509C: CEB1: CM-2: Rm 810F: 308-2717: Diclofop-Methyl